Napa River Sediment TMDL and Habitat Enhancement Plan

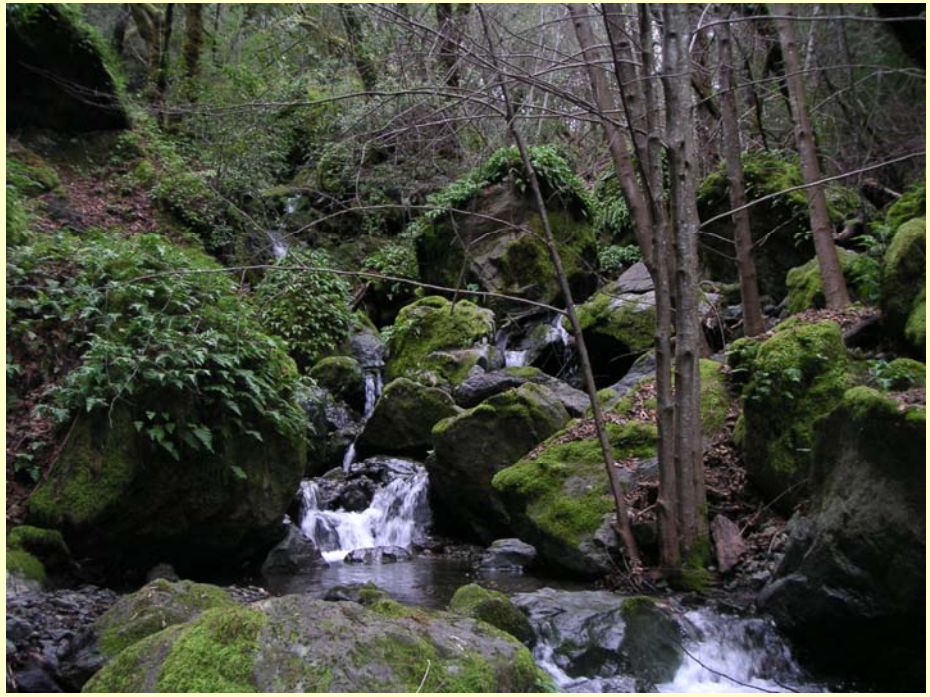
San Francisco Bay Regional Water Quality Control Board

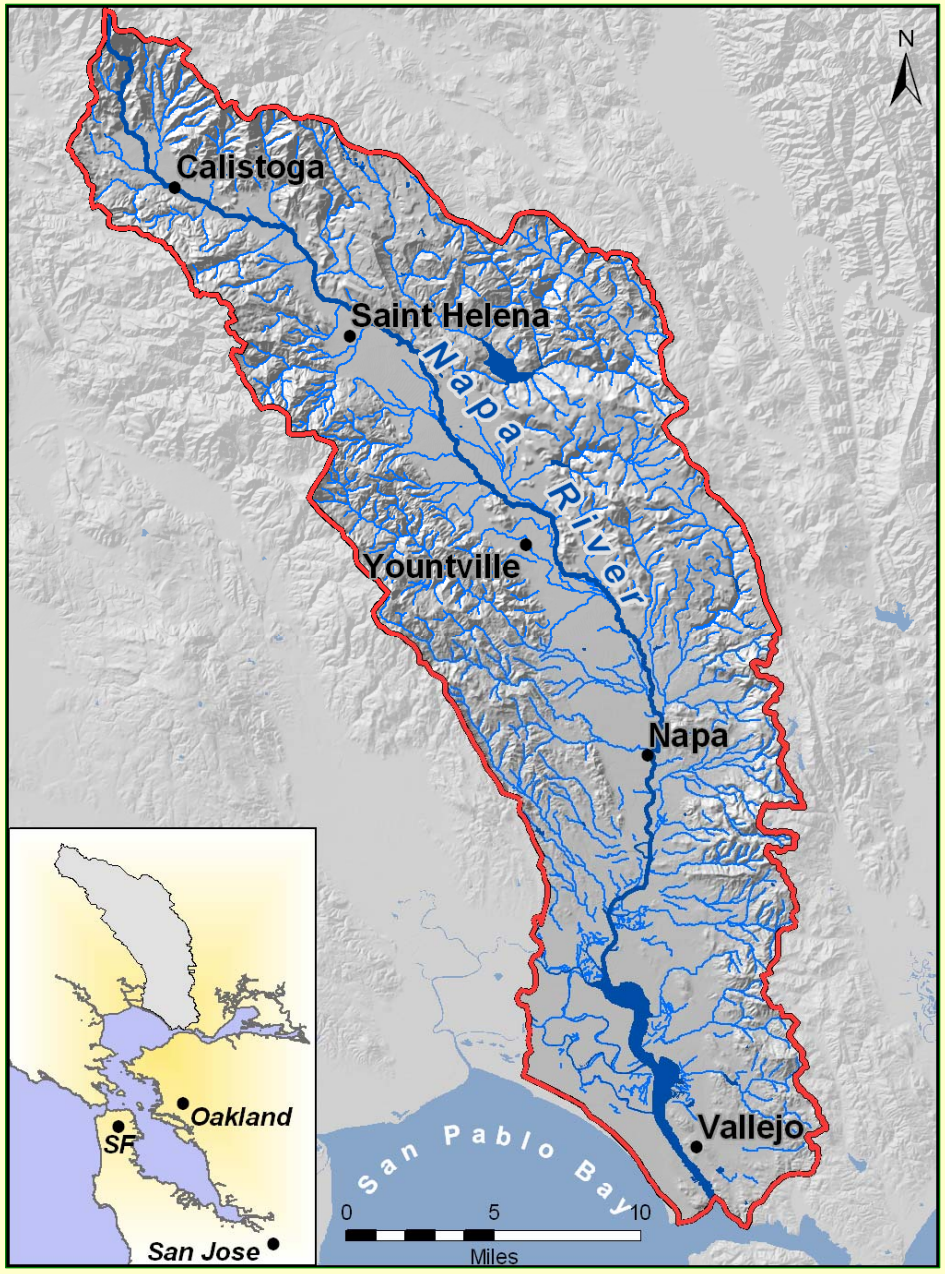
Mike Napolitano, Engineering Geologist
Dyan Whyte, TMDL Program Manager

CALIFORNIA Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

Today's presentation

- The Napa River
- Problems for fish
- Sediment TMDL and Habitat Enhancement Plan
- Implementation
- Comments
- Next steps





The Napa River watershed

- 55 miles of river
- Third largest watershed in the Bay Area
- Diverse native fish and wildlife communities
- Regionally significant steelhead and salmon runs

Fisheries in decline

- Since the 1940s, significant drop in steelhead and salmon populations
- Remaining populations vulnerable to extinction

A healthy river

Artwork by Sandi Potter

- Cool flowing water
- Riparian vegetation
- Complex channel topography
- Clean gravel bed
- Functioning floodplain

Healthy habitat in the Napa River

Photo Credit: Phillip Williams & Associates

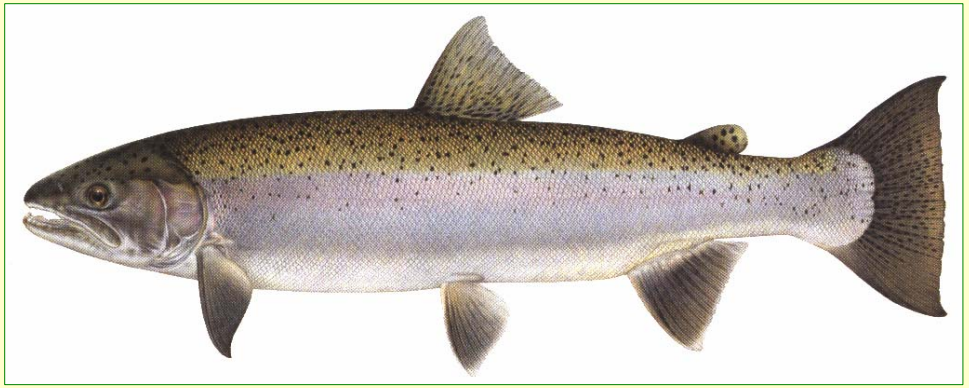
Napa River at Rutherford Cross Road (looking downstream)

Degraded habitat in the Napa River

Photo credit: Phillip Williams & Associates

The Napa River near Zinfandel Lane (looking upstream)

Problems for salmon and steelhead in the Napa River watershed



- Too much fine sediment in the streambed
- Bed and bank erosion in river and lower tributary reaches
- Low flows, high water temperatures in dry season
- Many fish migration barriers in tributaries
- Lack of large wood in the river and tributaries

Sediment sources

Natural erosion

Road-related

Vineyard-related

Grazing-related

Sediment sources

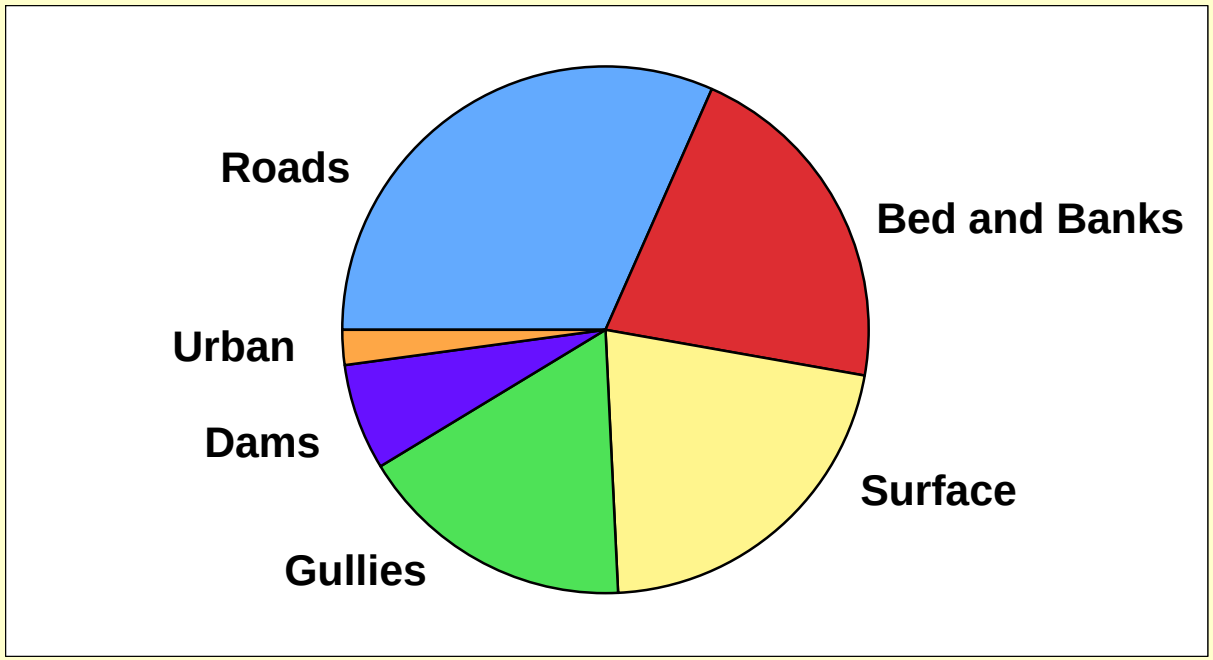
Human-caused Bed and Bank Erosion

Sediment load in the Napa River

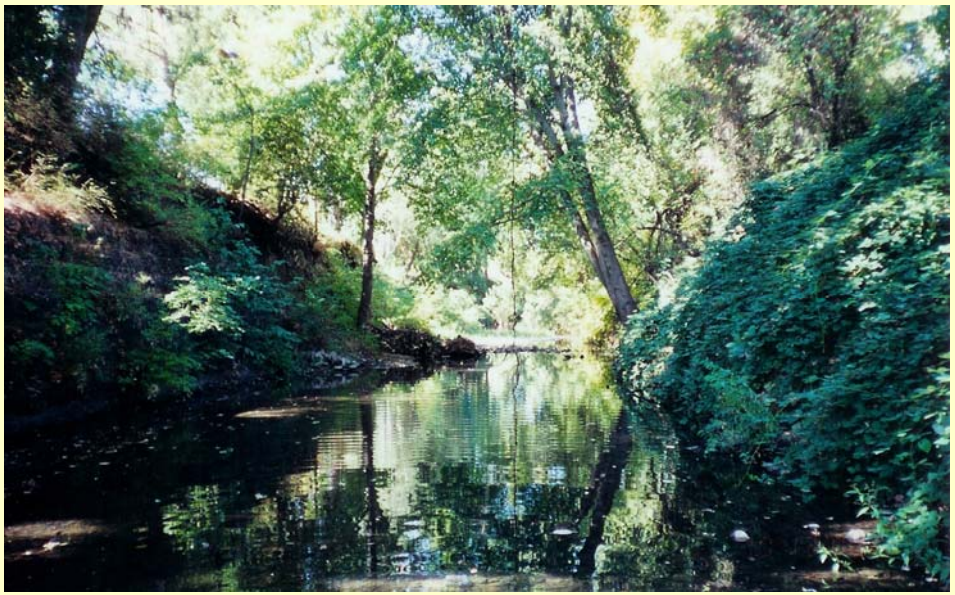
- Total sediment load is about 180% of natural background
- Average natural load = 150,000 tons/year
- Average total load = 270,000 tons/year

The Napa River near Zinfandel Lane

Human-caused sediment sources to the Napa River



The proposed Basin Plan amendment



- Two key elements
  - TMDL & Implementation Plan for sediment
  - Habitat Enhancement Plan to address other problems for fish

The Napa River Sediment TMDL

- Two targets define a healthy streambed
  - Gravel permeability
  - Depth of streambed scour

The Napa River Sediment TMDL

- Sediment TMDL = 125% of natural background
  - Requires 50% reduction in human-caused sediment inputs

TMDL implementation framework

- Waste discharge requirements (WDRs) and/or waivers for vineyards, rural areas, and grazing lands
- Stormwater NPDES permits
- Cooperative efforts to reduce bed and bank erosion

Habitat Enhancement Plan recommends actions to…

1) E**nhance habitat complexity**
2) Protect or **enhance summer flows**
3) Restore **fish passage**
4) Maintain or lower **stream temperatures**

Comments

- Support from federal, state, and local agencies and groups for elements of the TMDL and plan

Comments

- Issues raised:
  - Allocations for NPDES permit holders
  - Scientific details
  - Environmental review
  - Water Rights concerns
  - Cost of implementation

Next steps

- Continue to engage with agencies and interested parties
- Prepare responses to comments
- Revise Basin Plan amendment and staff report as necessary
- Adoption hearing